STATE AVIATION
SYSTEM PLAN
UPDATE
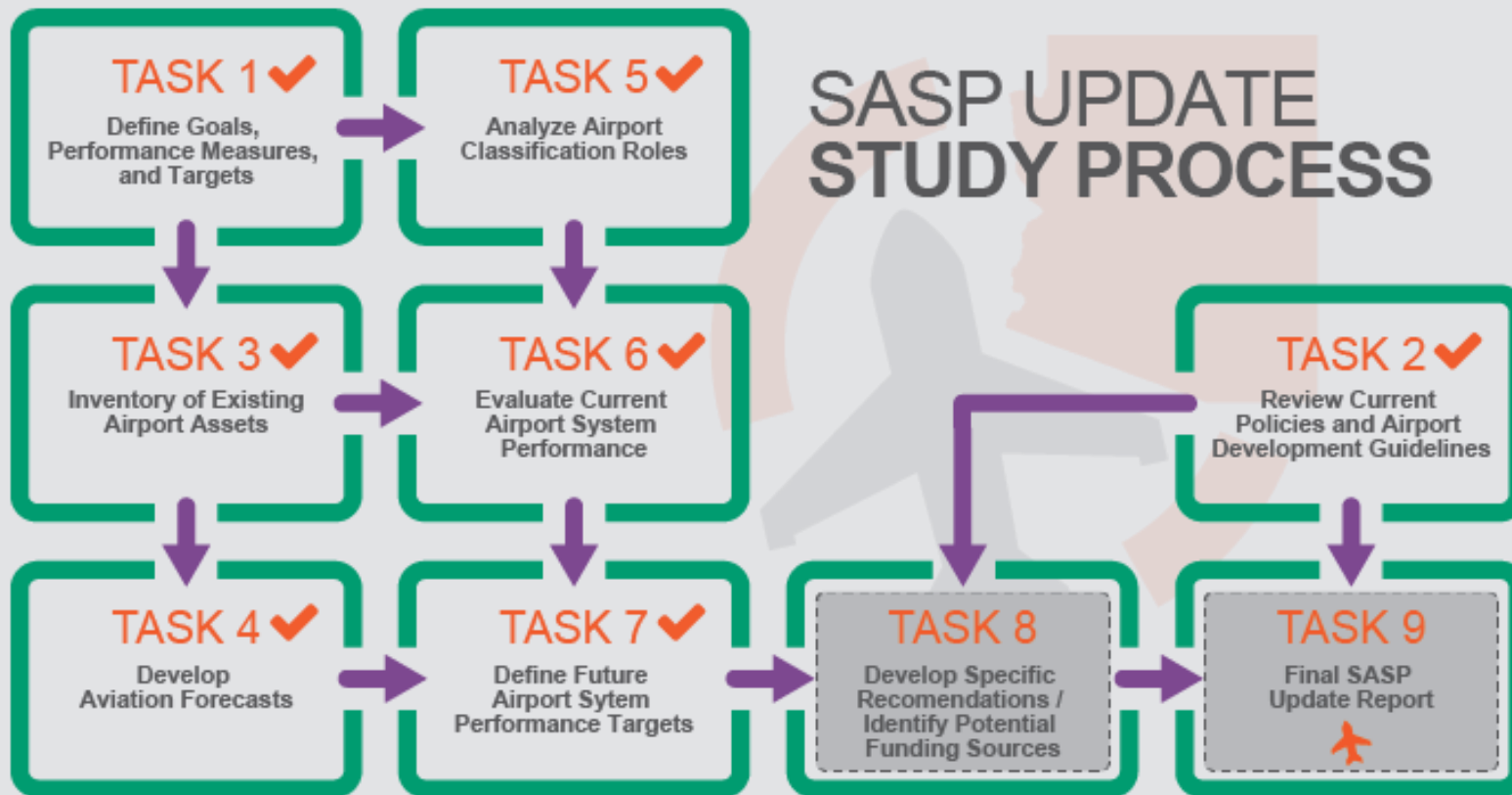
ADOT

Kimley»Horn

Spring AzAA
May 2018

Topics

- ADOT SASP Summary

- Airport Land Use Compatibility

SASP Process, Vision, and Goals

Only two remaining chapters of SASP Report

SYSTEM VISION & GOALS

VISION. To provide the framework that will allow Arizona's aviation system to meet the needs of citizens, visitors, and businesses by supporting economic competitiveness, connectivity, and accessibility with a commitment to safety, sound resource management, and partnerships.

Vision

System Plan Goals

Performance Measures

Targets

POLICY RECOMMENDATIONS

2017 SASP Update Goals

SAFETY **AND SECURITY**

Arizona should maintain a safe and secure airport system as measured by compliance with applicable safety and security standards while supporting health and safety-related services and activities.

FISCAL **RESPONSIBILITY**

Arizona should implement cost-effective investment strategies to meet current and projected demand while remaining adequately accessible to Arizona's citizens, visitors, and businesses.
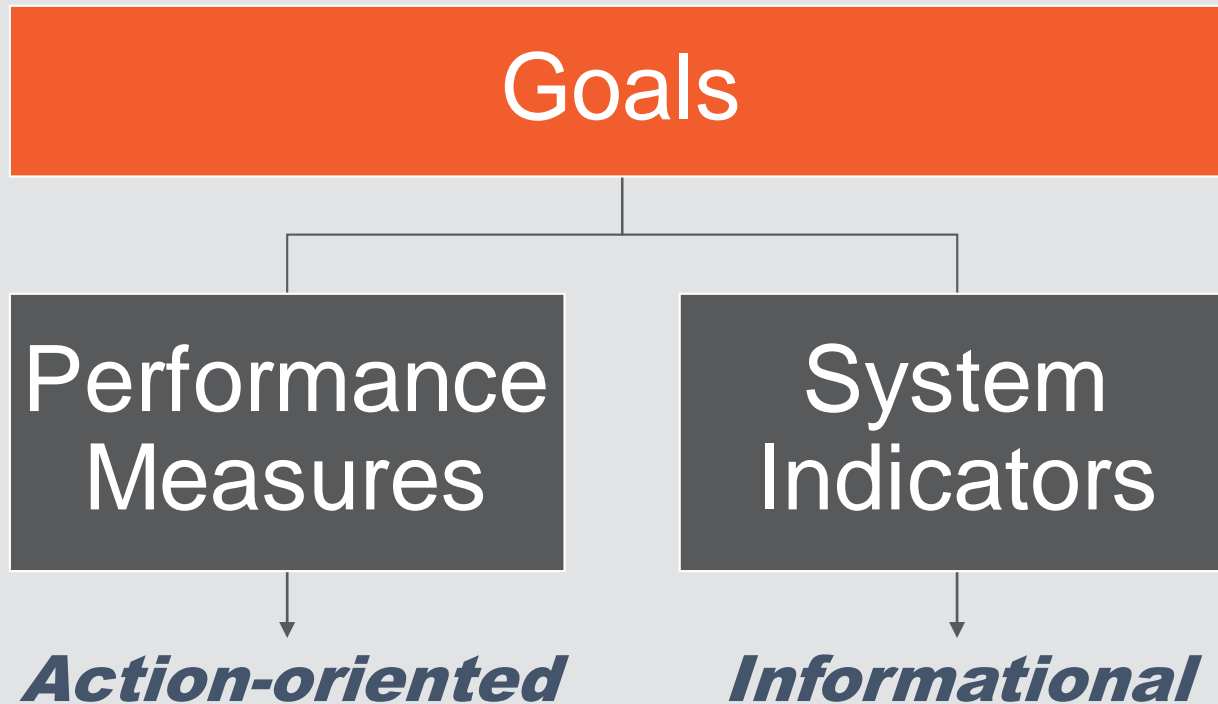
ECONOMIC **SUPPORT**

Arizona should advance a system of airports that supports Arizona's economic growth and development and promotes partnerships in a manner that reflects Arizona's socioeconomic and demographic characteristics.
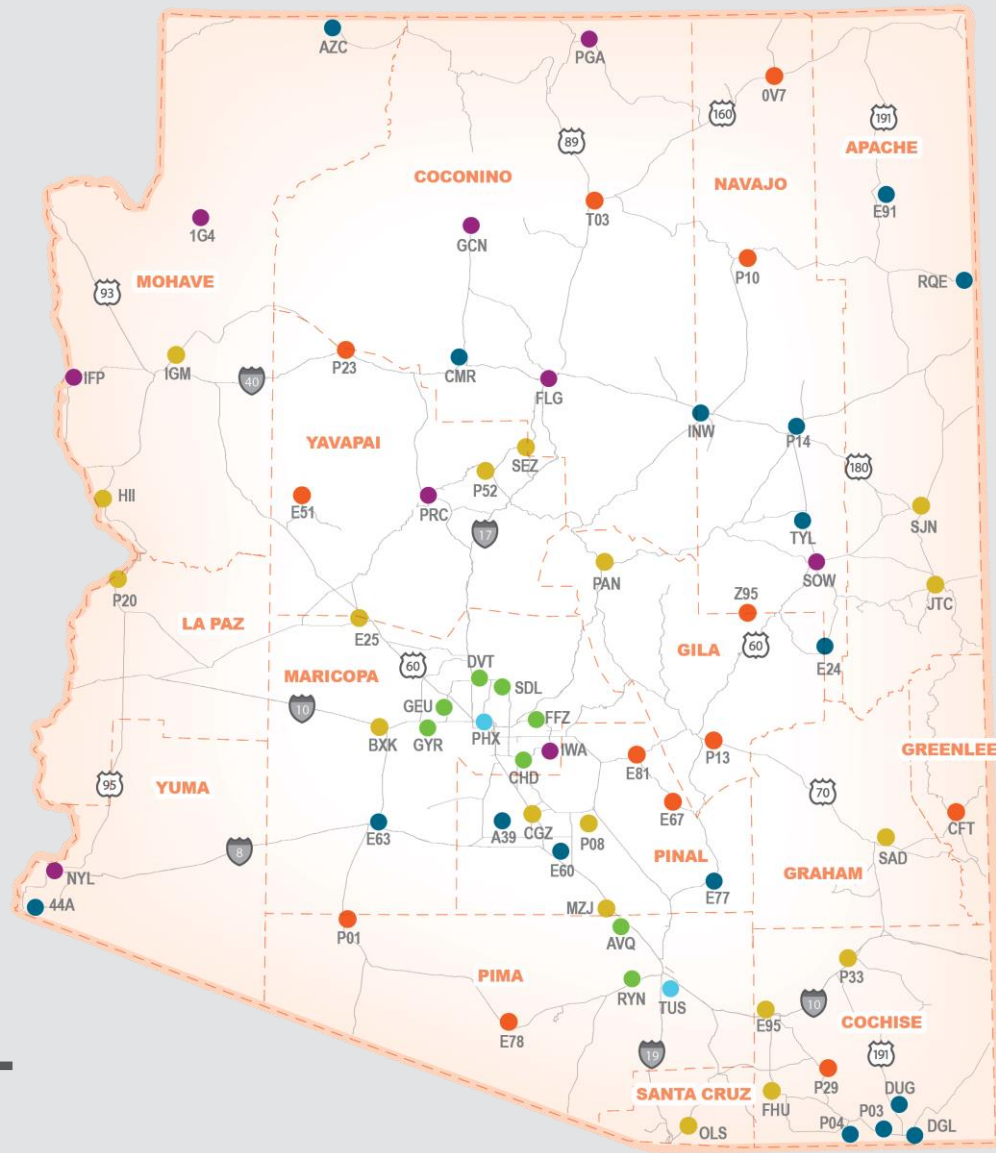
Performance Measures and System Indicators

System Airports and Classifications

The Arizona airport system is defined as all public-use airports owned by a political subdivision of the state or Tribal government.

STATE CLASSIFICATIONS

- GA-Basic
- GA-Community
- GA-Rural
- Reliever
- Commercial-International
- Commercial-National

2008/2017 Airport Classification Comparison

Role/Classification	2008 SASP	2017 SASP	Total Change	Example SASP Airports Within 2017 Classification
Commercial Service-International		2	2	Phoenix Sky Harbor International Tucson International
Commercial Service- National	11	9	9	Ernest A. Love Field Flagstaff Pulliam Phoenix-Mesa Gateway Show Low Regional Yuma International
Reliever	8	8	8	Marana Regional Phoenix Deer Valley Ryan Airfield Scottsdale
GA-Community	24	18	↓6	Cottonwood Municipal Lake Havasu City Payson Safford Regional
GA-Rural	19	17	↓2	Ak Chin Regional Chinle Municipal H.A. Clark Memorial Field San Manuel
GA-Basic	5	13	↑8	Bagdad Eric Marcus Municipal Tombstone Municipal Tuba City

Facility and Service Objectives

- **Not** standards or requirements
- Minimum levels of development
- Recommendations for services and facilities by classification

Component	Airport Criteria	
Airside Facilities	ARC	Runway Surface
	Runway Length	Approach Capability
	Taxiway	Visual Aids
	Lighting	Approach Lighting System
Landside Facilities	Operations/Maintenance Hangar	
	Hangars	Auto Parking
	Apron	Terminal/Pilot's Lounge
Landside Services	Fixed-base Operator (FBO)	Aircraft Maintenance
	Avionics Sales and Service	Off-Site Rental Car
	On-Site Rental Car	Restroom
	Phone Access (Landline or Cell)	U.S. Customs
	Fuel	Deicing
	Snow Removal	Oxygen
	Weather Reporting	Air Taxi/Charter Service
	Aircraft Rental	

Current / Future System Performance
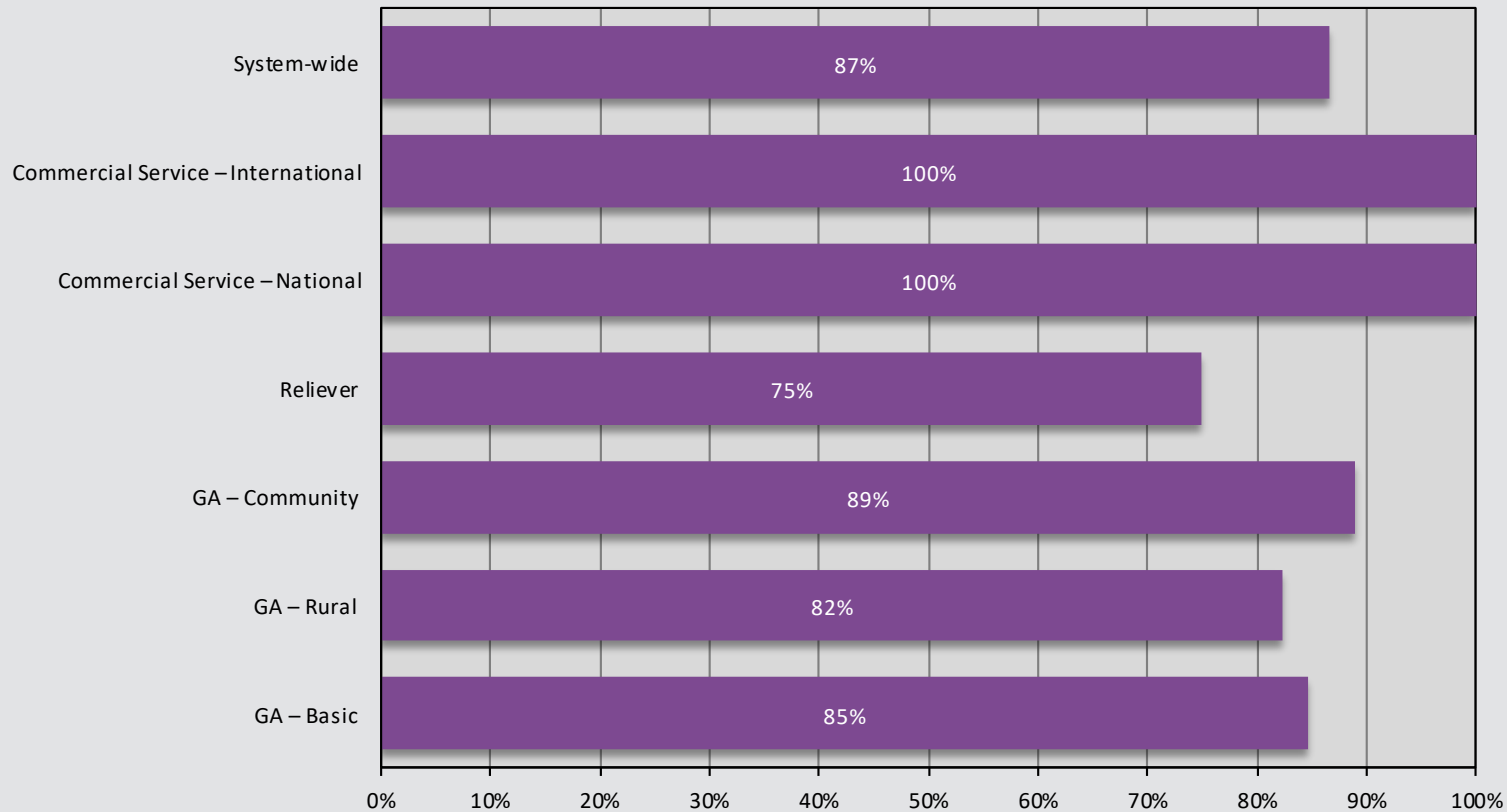
System Performance Assessment

- Provides data to evaluate the system's ability to meets current and future needs by identifying areas of:

  - **Adequate service**

  - **Surplus or duplication**

  - **Deficiencies**

- Analyses organized by goal category utilizing:*
  - Performance measures (PMs): Action-based
  - System indicators (SIs): Informational

Future targets only established for PMs, as SIs are primarily used to monitor the system over time.

Percent of airports that have an RSA on their primary runway that meet the standards for their current ARC

Category	Percent
System-wide	87%
Commercial Service – International	100%
Commercial Service – National	100%
Reliever	75%
GA – Community	89%
GA – Rural	82%
GA – Basic	85%

Performance Measure

RSA Analysis

2008 Performance	2017 Performance	Future Target
59%	87%	100%
ADOT Priority: Medium		

Actions to Improve Performance

- Airports that do not have sufficient property control over RSAs should actively work with owners to acquire the property

- If the property is insufficiently maintained in accordance with FAA standards, the airport should identify and implement the most appropriate corrective action(s) to achieve compliance

Number of airports with a current (past 10 years) master plan
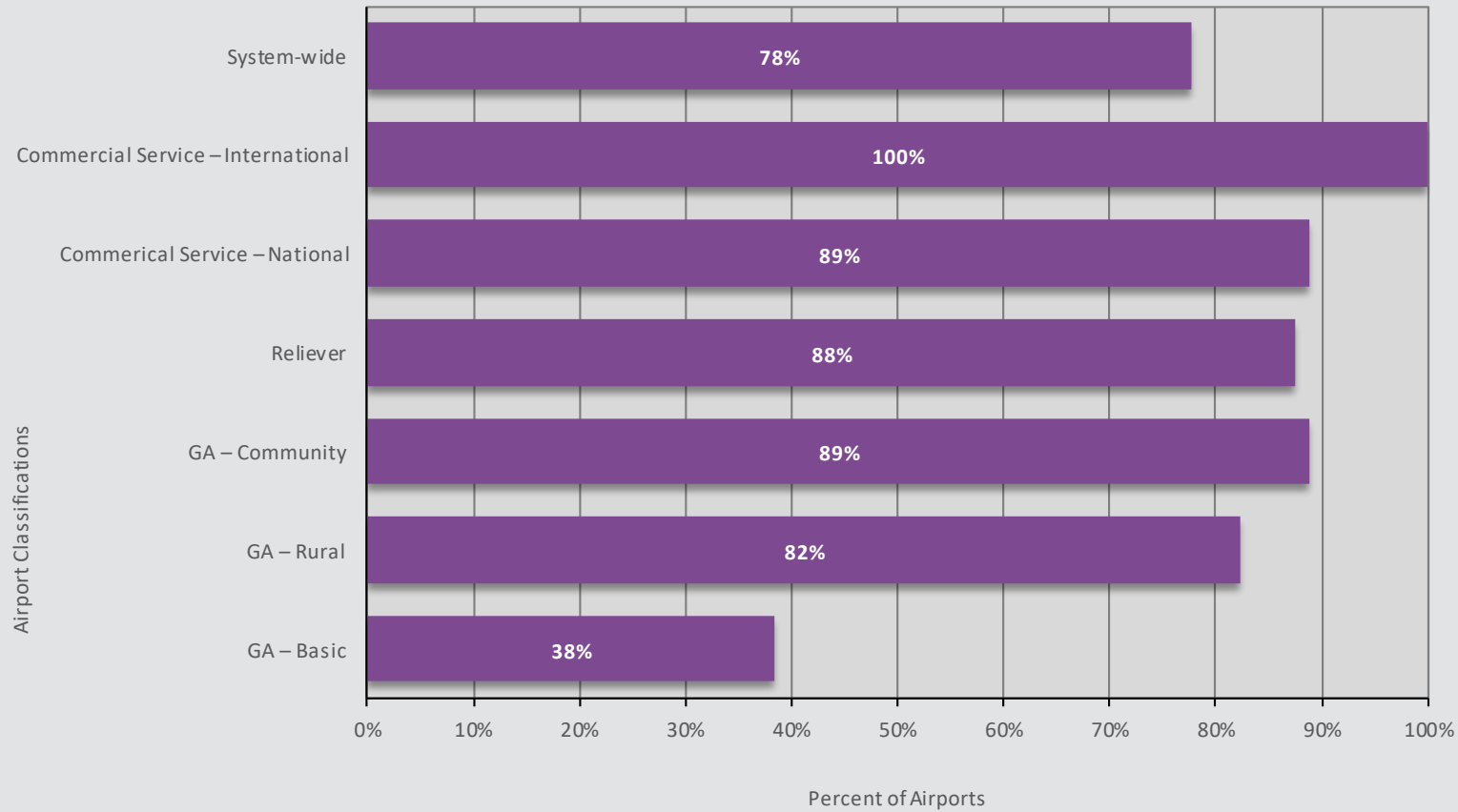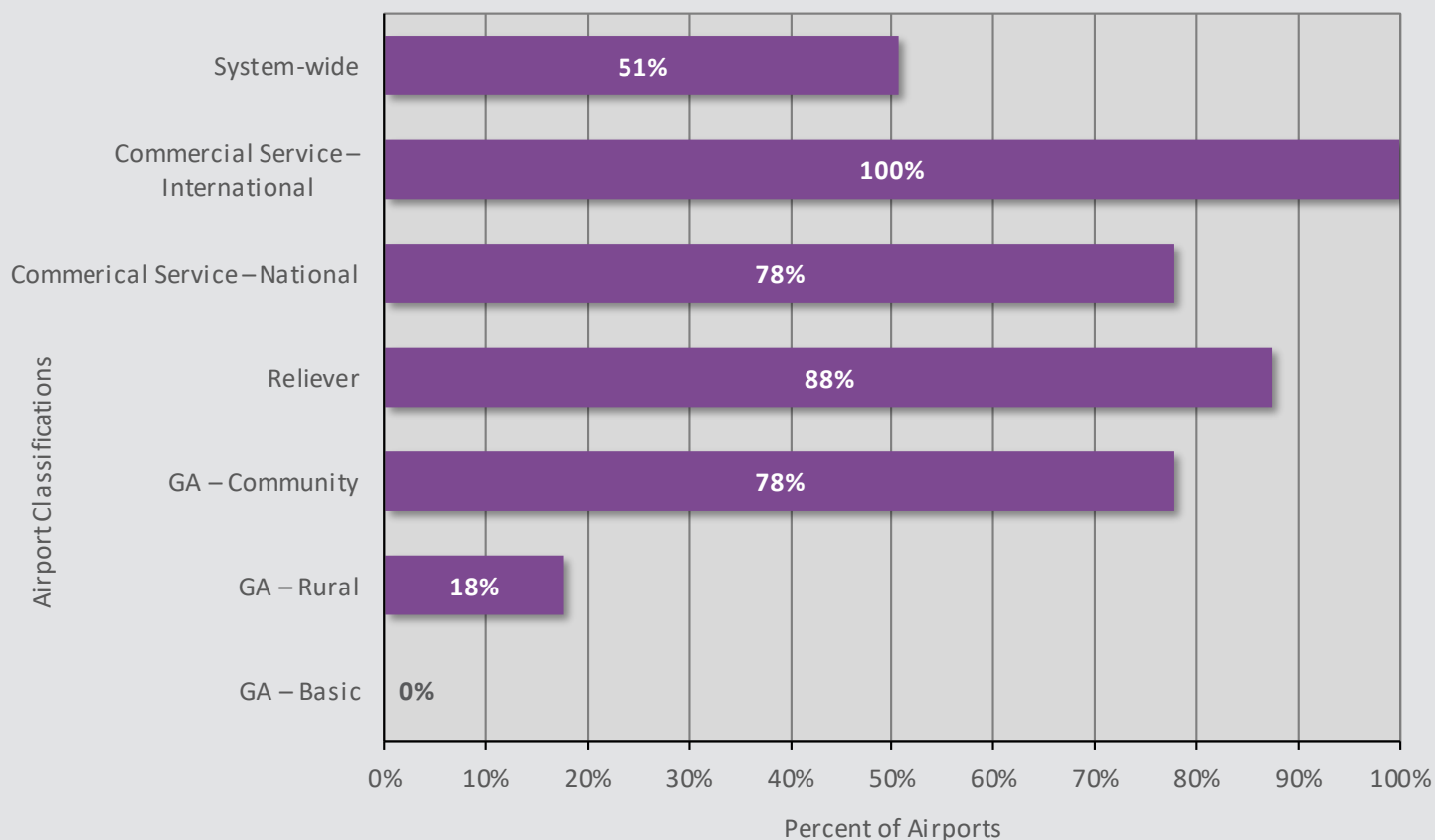

Performance Measure

Airport Master Plan Analysis

2008 Performance	2017 Performance	Future Target
NA	78%	100%
ADOT Priority: Medium		

Actions to Improve Performance

- Airports classified as GA-Community and above should complete a master plan update every 7-10 years

- GA-Rural and GA-Basic airport should complete an ALP update with narrative in lieu of a full master plan

*Percent of airports with the facilities to support jet aircraft**

Chart: Percent of airports with facilities to support jet aircraft, by Airport Classifications (x-axis: Percent of Airports):

- System-wide: 51%
- Commercial Service – International: 100%
- Commerical Service – National: 78%
- Reliever: 88%
- GA – Community: 78%
- GA – Rural: 18%
- GA – Basic: 0%

* 5,000+ foot runway, instrument approach, conventional hangar space, jet fuel

** 5,000 feet of runway length was used as the baseline; however, airports at high elevations will require a longer runway length

Performance Measure

Jet Facilities Analysis

2008 Performance	2017 Performance	Future Target
NA	51%	70%
ADOT Priority: Medium		

Actions to Improve Performance

- A published IAP and Jet A fuel are the most commonly missing criteria statewide. These are both objectives for the four highest classifications.

- If all airports meet their objectives, six additional airports would achieve this PM to increase system performance to 54 percent.

- Seven GA-Rural airports are suggested for improvement to meet future performance targets.
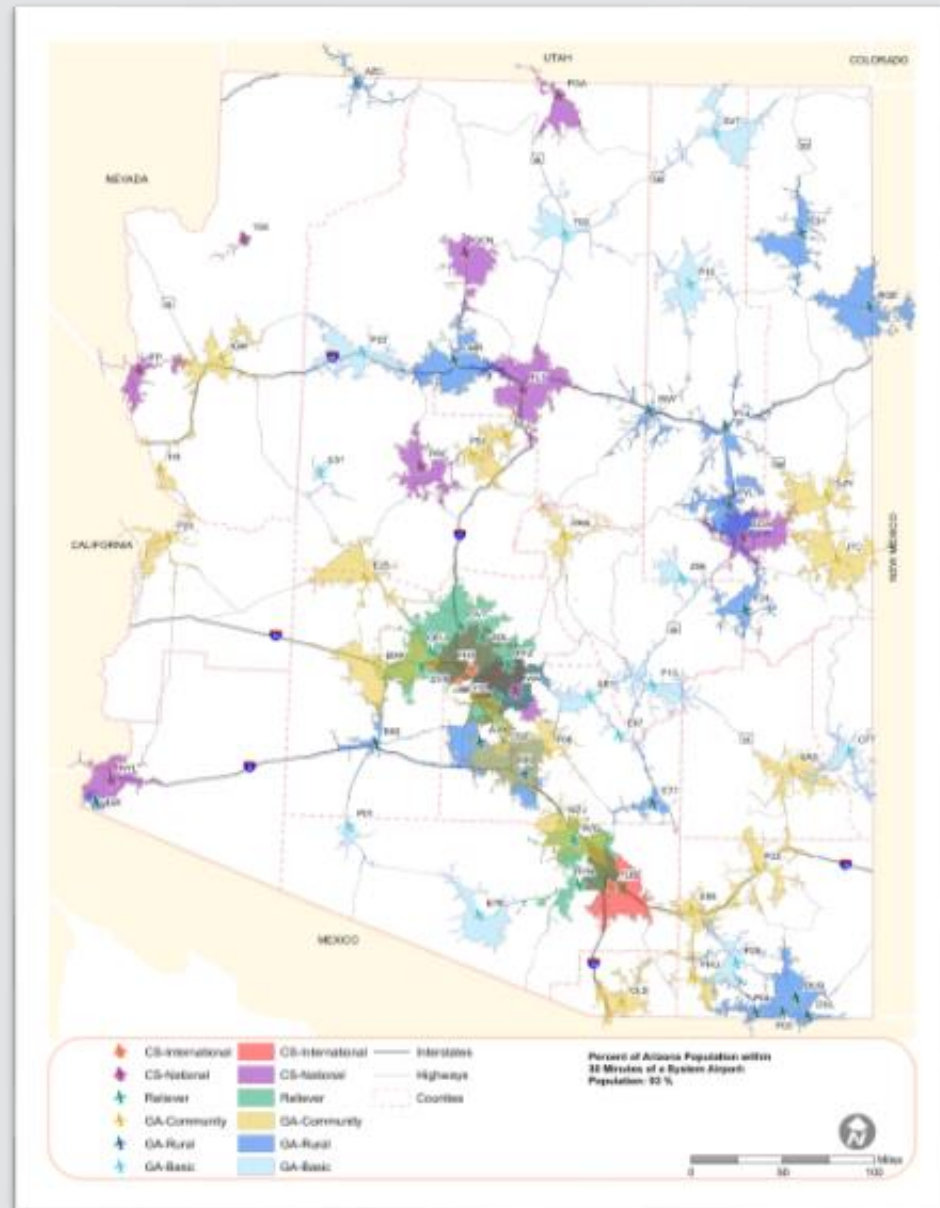

Pie chart:
- Conventional hangar 54%
- 5,000-foot runway 51%
- Published IAP 37%
- Jet A fuel 44%
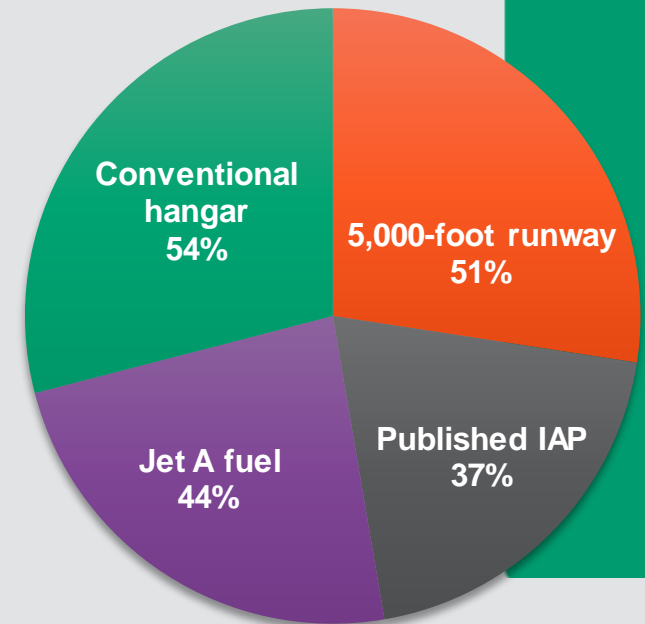
Percent of Airports Meeting Criterion to Support Jet Aircraft

Access to a system airport

93 percent

of the population is within 30 minutes of a system airport

2008 Recommendation: Inclusion of Tribal airports in the airport system
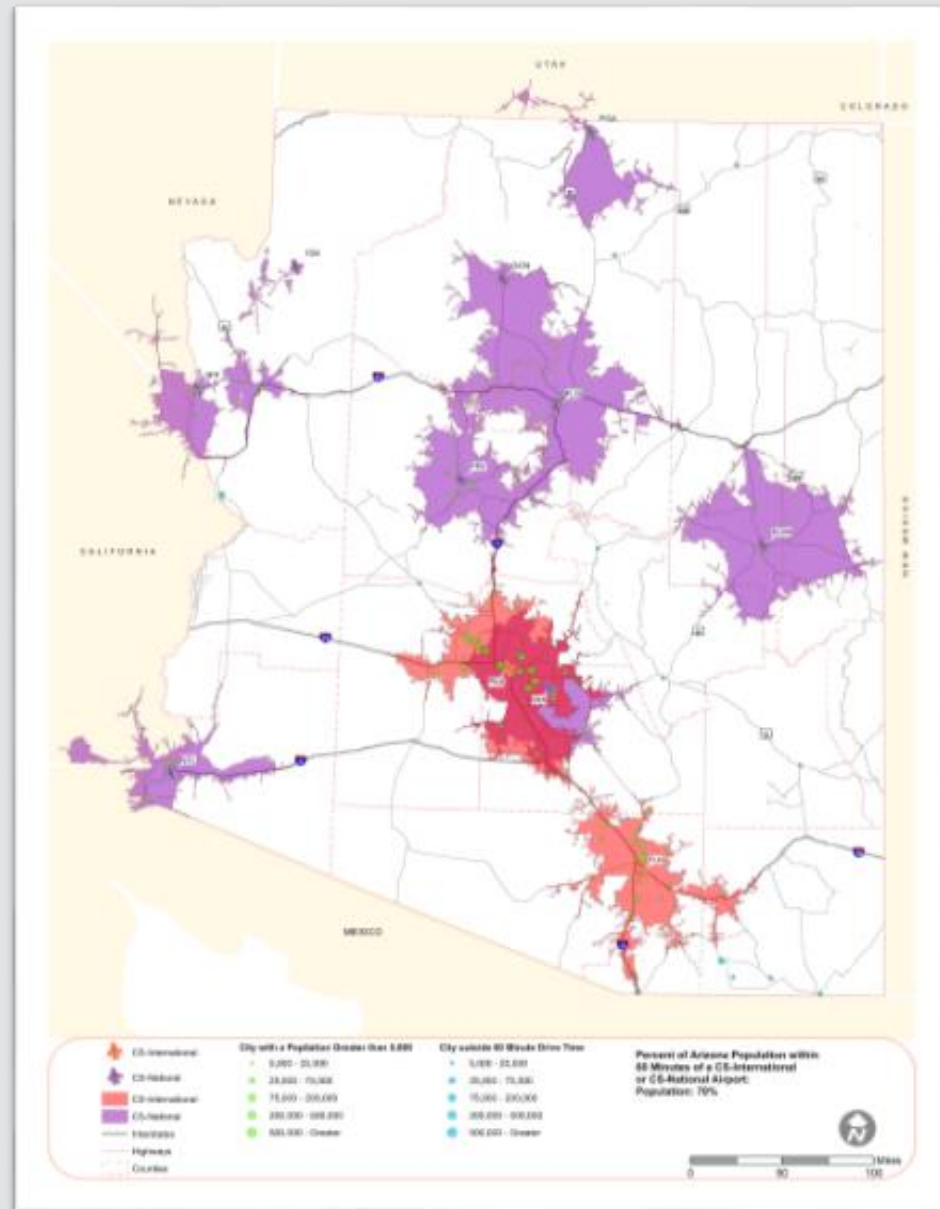
Access to a commercial service airport

70 percent

of Arizona's population is within 60 minutes of a commercial service airport

88% percent of communities with a population of 5,000 or greater are within a 60-minute drive time of a commercial service airport.

Examples of communities outside of this threshold include:

- Douglas
- Globe
- Kayenta
- Lake Havasu City
- Nogales
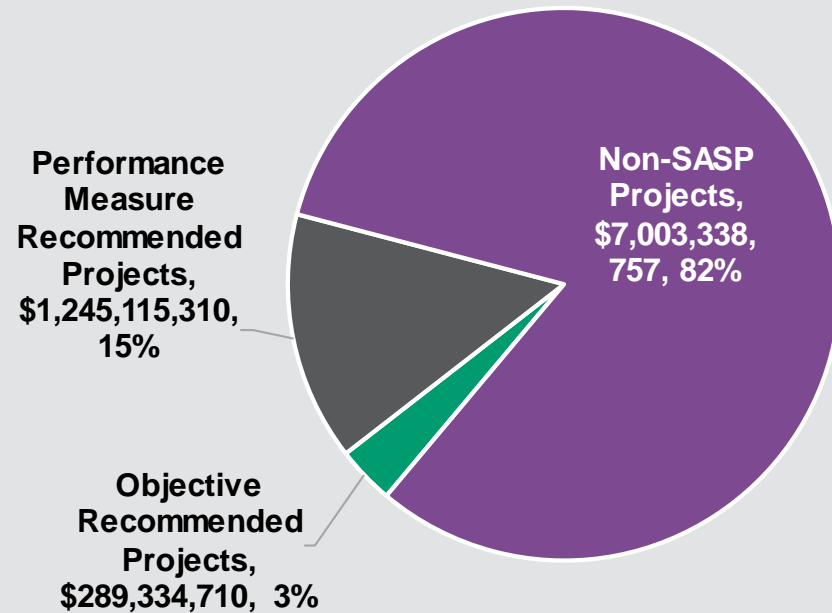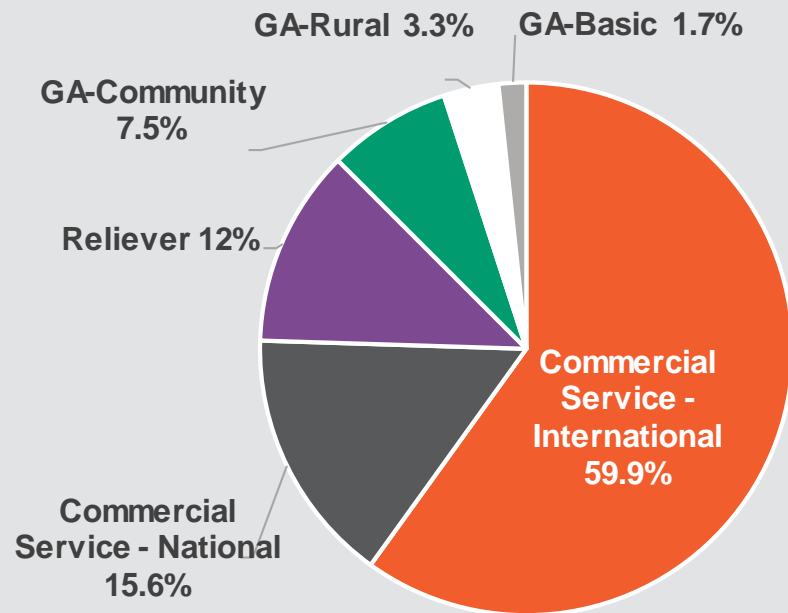- Payson
- Safford
- Sierra Vista
- Wickenburg

Summary of Needs

Total Funding Needs by Classification 2016-2036

$8.53 Billion

GA-Rural 3.3%

GA-Basic 1.7%

GA-Community 7.5%

Reliever 12%

Commercial Service - International 59.9%

Commercial Service - National 15.6%

Performance Measure Recommended Projects, $1,245,115,310, 15%

Non-SASP Projects, $7,003,338,757, 82%

Objective Recommended Projects, $289,334,710, 3%

All costs are in draft form. Costs are subject to change until the completion of this plan

Annualized Funding & Need

Funding Source	Funding
Federal – FAA	$129,540,836
State	$9,680,356
Local Match	$9,680,356
Total Average Annual Funding Received	**$148,901,549**

Funding Gap	Funding
Annual Need: SASP and Non-SASP Projects	$426,889,439
Annual Funding: Federal, State, and Local Match	**$148,901,549**
Annual Funding Gap	**$277,987,890**

All costs are in draft form. Costs are subject to change until the completion of this plan

Summary of Recommendations

Key Preliminary Recommendations

- Airports to meet facility and service objectives and performance measures
  - Some actions impact policy (next slide)
- Continuous planning
  - Monitoring system performance
  - Special studies
    - Demand/capacity
    - Unmanned Aerial Systems (UAS)
    - APMS
    - Economic impact
    - Obstruction mitigation
    - Others

Potential Policy Recommendations

Arizona Revised Statutes Title 28 – Chapter 25 Aviation

- Article 1: Gen. Provisions - *State Aviation Fund*
- Article 2: Aeronautics Division
- Article 7: Airport Zoning and Regulation

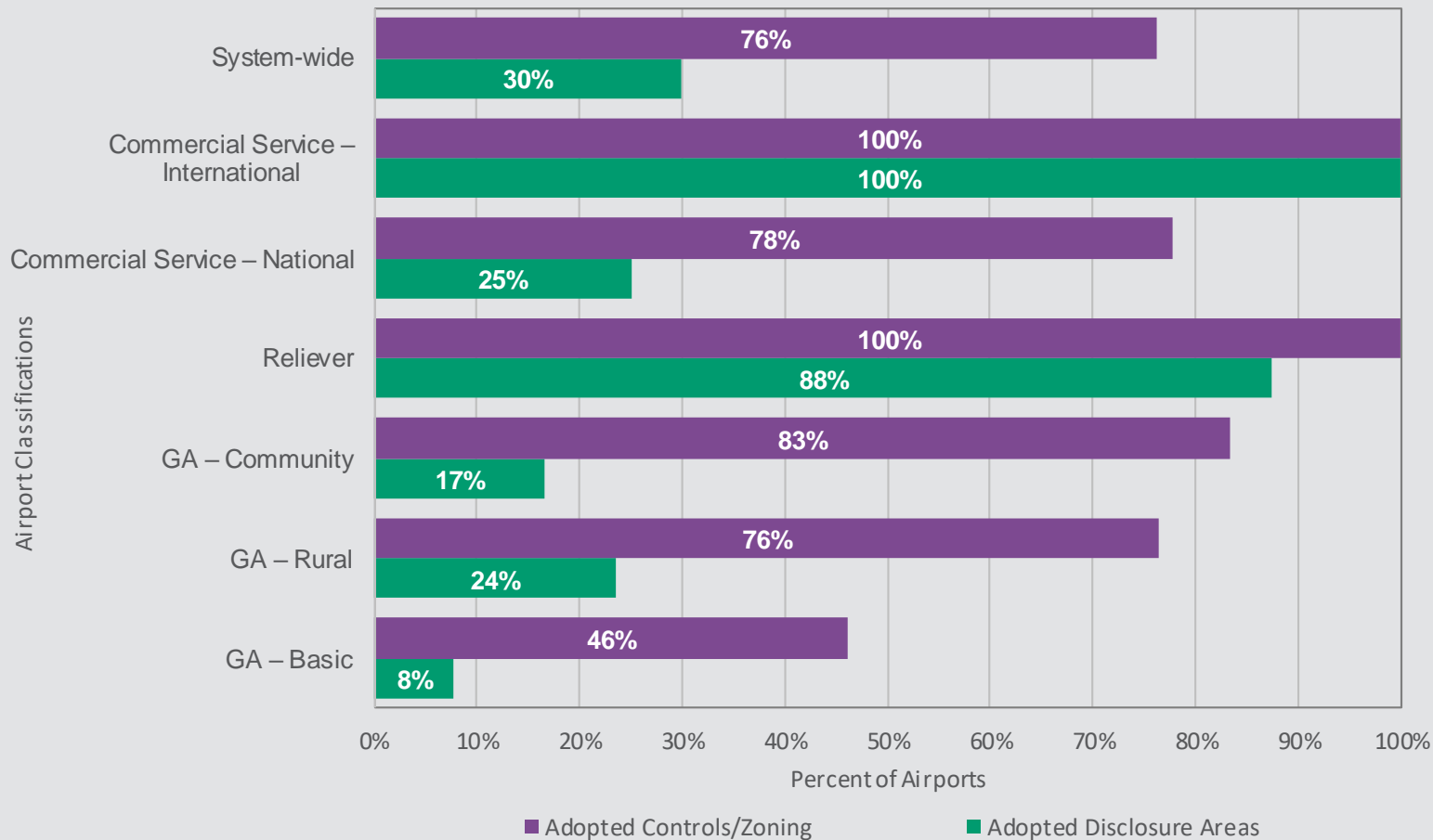**Arizona STB Aviation Policies**

- Resource Allocation Policy
  - Aeronautics (APMS, grant matches)
    - Reallocate funding between airport classifications
    - Separate program for highest priority SASP project type
  - Grand Canyon Nat'l Park Airport (GCN)
- Project Selection and Prioritization Criteria Policy
  - To be updated after every SASP

Airport Land Use Compatibility

Percent of airports with surrounding municipalities that have adopted controls/zoning, including "disclosure areas," to make land use in the airport environs compatible with airport operation and development*

Airport Classifications:

- System-wide: Adopted Controls/Zoning 76%, Adopted Disclosure Areas 30%
- Commercial Service – International: Adopted Controls/Zoning 100%, Adopted Disclosure Areas 100%
- Commercial Service – National: Adopted Controls/Zoning 78%, Adopted Disclosure Areas 25%
- Reliever: Adopted Controls/Zoning 100%, Adopted Disclosure Areas 88%
- GA – Community: Adopted Controls/Zoning 83%, Adopted Disclosure Areas 17%
- GA – Rural: Adopted Controls/Zoning 76%, Adopted Disclosure Areas 24%
- GA – Basic: Adopted Controls/Zoning 46%, Adopted Disclosure Areas 8%

X-axis: Percent of Airports (0% – 100%)

Legend: ■ Adopted Controls/Zoning ■ Adopted Disclosure Areas

Performance Measure

Controls/zoning may include but are not limited to airport influence areas. Data on airport influence areas specifically were not obtained during the 2017 SASP Update.

Land Use Fundamentals

- To promote development that is considered compatible with airports and preclude incompatible uses

- Key areas of concern:
  - Noise
  - Safety-related issues
    - Hazards to airspace and overflights
      - Tall structures, visual obstructions, wildlife attractants
    - Issues affecting accident severity
      - High concentrations of people, risk-sensitive uses, open lands

- Statutory obligation

Arizona Legislation

	Airport Influence Areas	**Airport Disclosure Maps**
Arizona Revised Statute (A.R.S.)	A.R.S. 28-8485	A.R.S. 28-8486
Purpose	Political subdivisions of the state that operate a public airport **may** designate all property within the vicinity of an airport as an **airport influence area** after a notice and a hearing.	All public-use airports **must** identify the area surrounding its facility on an **airport disclosure map** sufficient to notify existing or potential property owners that the area is subject to aircraft noise and overflights.
Process	A record of the airport influence areas is to be filed with the office of the county recorder in which the property is located.	Airport disclosure maps are to be filed with Arizona Department of Real Estate (ADRE) and with the office of the county recorder in which the property is located.
Airport Responsibility	STRONGLY RECOMMENDED	MANDATORY

Coverage Areas

Airport Influence Area
Property that is exposed to aircraft noise and overflights <u>and</u>

- Experience a day-night average sound level of 65 decibels (dB) or higher <u>or</u>

- Located within a geographical distance from an existing runway to expose it to aircraft noise and overflights as determined by the airport owner or operator

Airport Disclosure Map
Property within the traffic pattern airspace as defined by the FAA <u>and</u>

Located in a county with a population of 500,000 or greater	Experience a day-night average sound level of 60 dB or higher as identified in either the master plan for the 20-year planning period or in a noise study prepared in accordance with 14 CFR, Part 150, *Airport Noise Compatibility Planning*
Located in a county with a population of 500,000 or less	Experience a day-night average sound level of 65 dB or higher as identified in the airport master plan for the 20-year planning period
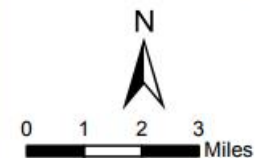
Source: ADRE 2017

Consequences of Incompatibility

- Consequences for airports and airport users:

  o Impacts to air service, including constraining air service and an airport's future development potential

  o Impacts to runways' approach and departure procedures

  o Increased safety risks due to obstructions and wildlife

  o Unrealized development potential due to airport growth constraints

- Increased exposure to noise, emissions, and safety risks for people in the vicinity of the airport

- Economic impacts:

  o Litigation concerns if an accident should occur

  o Lost revenue and development potential for entire communities

Source: Airport Cooperative Research Program Report No. 27: Enhancing Airport Land Use Compatibility

Actions to Improve Performance

- Airports should engage with their local municipal planning department, zoning commission, and/or city to develop and implement airport zoning, height controls, and other measures (as appropriate)

- Comply with A.R.S. – mandatory Airport Disclosure Map and consider implementing Airport Influence Area

- Resources
  - Airport Cooperative Research Program Report No. 27: *Enhancing Airport Land Use Compatibility*
  - Upcoming FAA AC on airport compatible land use

Next Steps

Upcoming Tasks

- Finalize last two chapters
- Develop Executive Summary
- Prepare Final Report

Transportation Programs

Arizona State Aviation System Plan (SASP) Update

Documents

This section provides the relevant documentation of the 2017 SASP Update.

SASP Update Documents

The following documents have been developed as part of the SASP (Update study process. Please note that technical report chapters are not being developed chronologically, as the SASP Update is not a linear process. Instead, a series of interrelated tasks are occurring, and working documents will be posted as available.

- Arizona Airports Association (AzAA) Spring Conference Presentation (April 2017)
- Technical report chapters
  - Chapter One: Aviation System Goals and Performance Measures (August 2017)
  - Chapter Two: Review of Current Policy (January 2018)
  - Chapter Three: Identification of Airport Assets (October 2017)
  - Chapter Four: Forecasts of Aviation Demand (February 2018)
  - Chapter Five: Airport Classification Analysis (December 2017)
  - Chapter Six: Current System Performance (March 2018)
  - Appendix D: Arizona Demographics (February 2018)
  - Appendix E: Facility and Service Objectives (March 2018)

Get Involved!

- Provide comments on online SASP materials and utilize results

- Promote the economic and qualitative benefits of aviation to the community and others in leadership positions

- Support airport compatible land use planning, zoning ordinances, and community planning efforts

- Participate in airport-specific planning efforts, including the development of airport master plans

Thanks to our PAC!

Don Kriz	ADOT Aeronautics
Matt Smith	ADOT Aeronautics
LaDell Bistline	Colorado City
Zenia Cornejo	Falcon Field
Mark Edelman	AZ State Land
Kyler Erhard	FAA
Jordan Feld	City of Phoenix
Bill Gillies	Luke Air Force Base
Charla Glendening	ADOT MPD
Micah Horowitz	AZ State Land
Lisa Marra	Cochise County
Scott Robidoux	Tucson Airport Authority
Stacy Howard	NBAA
Arlando Teller	Navajo DOT
Jim Timm	Arizona Pilot's Association
Marisa Walker	AZ Commerce Authority
Gladys Wiggins	Yuma International Airport

Thoughts?

Thank You!

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